

WHAT IS CLAIMED IS:

- 1 1. A method for providing comprehensive service translation,
2 comprising:
3 determining the protocol of a service discovery request received from a
4 client;
5 translating the protocol of the service discovery request into a service
6 discovery protocol used by a service registry, the translated service discovery request being
7 used to discover a service provider of the service requested;
8 detecting incompatibilities between the client and the service provider; and
9 translating the service provided to the client by the service provider in
10 response to the detected incompatibilities.
- 1 2. The method according to Claim 1, wherein translating the protocol includes
2 selecting one of a plurality of service discovery interfaces that are compatible with the
3 service registry.
- 1 3. The method according to Claim 2, wherein the number of service discovery
2 interfaces is programmable.
- 1 4. The method according to Claim 1, wherein detecting the incompatibilities
2 comprises analyzing session descriptions contained within Session Initiation Protocol (SIP)
3 messages exchanged between the client and the service provider.
- 1 5. The method according to Claim 4, wherein the session descriptions
2 transmitted by the client reflect the capabilities of the client.
- 1 6. The method according to Claim 5, wherein the capabilities of the client
2 include media session capabilities.
- 1 7. The method according to Claim 6, wherein the session descriptions
2 transmitted by the service provider reflect the capabilities of the service provider.

1 8. The method according to Claim 7, wherein the capabilities of the service
2 provider include media session capabilities.

1 9. The method according to Claim 8, wherein translating the service provided
2 comprises translating media received from the service provider into a format compatible
3 with the media session capabilities of the client.

1 10. The method according to Claim 4, wherein translating the service provided
2 comprises:
3 modifying the session descriptions received from the client to match the session
4 descriptions received from the service provider; and
5 transmitting the modified session descriptions to the service provider.

1 11. The method according to Claim 10, wherein translating the service
2 provided further comprises:
3 modifying the session descriptions received from the service provider to match the
4 session descriptions received from the client; and
5 transmitting the modified session descriptions to the client.

1 12. The method according to Claim 4, wherein translating the service provided
2 comprises:
3 receiving messages from the service provider using a first transport protocol; and
4 transmitting the messages received from the service provider to the client using a
5 second transport protocol.

1 13. The method according to Claim 12, wherein translating the service provided
2 comprises:
3 receiving messages from the client using the second transport protocol; and
4 transmitting the messages received from the client to the service provider using the
5 first transport protocol.

1 14. A service translation system, comprising:
2 a service requestor coupled to the service translation system and adapted to
3 submit a service request using a first protocol;
4 a service translation proxy coupled to the service requestor and adapted to
5 translate the first protocol of the service request into a second protocol; and
6 a service provider coupled to the service translation system and adapted to
7 provide the service requested, wherein the service translation proxy is further adapted to
8 translate the service provided into a format that is compatible with the service requestor.

1 15. The service translation system according to Claim 14, wherein the service
2 translation proxy comprises a programmable number of service discovery protocol
3 interfaces.

1 16. The service translation system according to Claim 15, further comprising a
2 service registry coupled to receive the service request in the second protocol, wherein the
3 service request is transmitted by one of the programmable number of service discovery
4 protocol interfaces.

1 17. A service translation proxy, comprising:
2 means for receiving a service request from a service requestor;
3 means for translating the service request from a first protocol to a second
4 protocol;
5 means for locating a service provider to provide the service requested; and
6 means for translating the service provided into a format that is compatible
7 with capability information associated with the service requestor.

1 18. The service translation proxy according to Claim 17, further comprising:
2 means for receiving the service provided using a first transport protocol;
3 and
4 means for providing the service provided using a second transport protocol.

1 19. A computer-readable medium having instructions stored thereon which are
2 executable by a service translation proxy for facilitating network service translations by
3 performing steps comprising:

4 receiving a service request from a service requestor;
5 translating the service request from a first protocol to a second protocol;
6 locating a service provider to provide the service requested; and
7 translating the service provided into a format that is compatible with
8 capability information associated with the service requestor.

1 20. The computer-readable medium according to Claim 19, wherein locating a
2 service provider comprises issuing the translated service request to a service registry.

1 21. The computer-readable medium according to Claim 19, wherein locating a
2 service provider comprises forwarding the service request to another service translation
3 proxy located within the network.

1 22. A home network, comprising:
2 a plurality of home devices adapted to exchange media content in a first
3 format;
4 at least one mobile device adapted to exchange media content in a second
5 format; and
6 a service translation proxy coupled to the plurality of home devices and the
7 at least one mobile device, wherein the service translation proxy is adapted to translate the
8 media exchanged between the plurality of home devices and the at least one mobile device
9 in response to their respective capabilities.

1 23. The home network according to Claim 22, wherein the service translation
2 proxy is coupled to the plurality of home devices and the at least one mobile device via a
3 proximity connection.

1 24. The home network according to Claim 23, wherein the proximity
2 connection includes a Bluetooth connection.

1 25. A method of exchanging media between a mobile device and a home
2 device, the method comprising:
3 establishing the mobile device and the home device as entities of a wireless
4 home network;
5 evaluating differences in media capabilities between the mobile device and
6 the home device; and
7 translating media exchanged between the mobile device and the home
8 device in response to the media capability differences between the mobile device and the
9 home device.

1 26. The method according to Claim 25, wherein evaluating the differences in
2 media capabilities comprises:
3 automatically determining the media format capability of the mobile device using a
4 service translation proxy; and
5 automatically determining the media format capability of the home device using the
6 service translation proxy.

1 27. The method according to Claim 26, wherein translating the media
2 comprises:
3 translating the media format received from the home device into media
4 format that is compatible with the media format capability of the mobile device; and
5 translating the media format received from the mobile device into media
6 format that is compatible with the media format capability of the home device.